

# METHODS AND DEVICES FOR IMPROVING BREATHING IN PATIENTS WITH PULMONARY DISEASE

## Abstract

Methods, apparatus, and kits for enhancing breathing in patients suffering from chronic pulmonary obstructive disease are described. The methods and apparatus rely on increasing flow resistance to expiration in a manner which mimics "pursed lip" breathing which has been found to benefit patients suffering from this disease. In a first example, a device is implanted in a trachea or bronchial passage to increase flow resistance, preferably selectively increase resistance to expiration relative to inspiration. In a second embodiment, a mouthpiece is provided, again to increase resistance to expiration, preferably with a lesser increase in flow resistance to inspiration. In a third embodiment, the patient's trachea or bronchial passage is modified by the application of energy in order to partially close the lumen therethrough.

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